

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: LIN ET AL.

Application No. 10/733,016

Group Art Unit: 2168

Confirmation No. 7499

Examiner: LE, Debbie M

Filed: December 10, 2003

For: MAINTAINING AND DISTRIBUTING RELEVANT ROUTING INFORMATION BASE UPDATES TO
SUBSCRIBING CLIENTS IN A DEVICE

REPLY BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The following comments are directed to the same numbered paragraphs in the
Examiner's Answer on pages 12-14 of the Office action.

**1. Appellants reply, in addition to that presented in Appellants Appeal Brief, to
arguments on pages 12-13 of the Examiner's Answer.**

The Office fails to present a *prima facie* rejection of any pending claim. Each of the
claims recite limitations requiring, *inter alia*, routing changes be distributed in a single device
(e.g., router).

The Office's rejection is based on the following logic.

- a) Butehorn et al., the main reference, teaches distributing routing information in a diverse network (not within a single device).
- b) Basturk et al. teaches that a "peer" is a peer router - a different device. Basturk et al. at Title, Abstract, Background of the Invention (e.g., col. 2, line 27).
- c) The Office asserts that one skilled in the art would modify Butehorn et al. to have its clients in a single device because of the teaching of Basturk et al. at col. 3, lines 58-61. This citation and its previous sentence are:

"What is clearly needed is a method and apparatus that provides a virtual buffer for buffering one set of NLRIs that can be processed simultaneously by all of the peers. A method and apparatus such as this would enable reduction of outbound packet buffering and would allow for the frequency of updates to adjust to the speed at which they can be processed on the receiver end."

This teaching by Basturk et al. relied upon by the Office is for optimizing the sending of NLRIs to different devices (not within a single device).

Therefore, the Office's rational for modifying Butehorn et al. is to make it more optimized for sending information to other devices. This rational is *non sequitur* to the proposed modification by the Office. How does optimizing data being sent between different devices teach the modification of a system sending information among multiple devices to sending information (in a particular recited manner) within a single device? It does not. Therefore, the Office fails to present a coherent *prima facie* obviousness rejection.

Additionally, Appellants respectfully submit that a modification of Butehorn et al. would render it unfit for its intended purpose of routing information over a radio/satellite network to diversely located route server and terminals in contradiction of *In re Gordon* [reversing the Board's decision as it relied upon a modification of the French apparatus (liquid strainer) in a manner rendering it unfit for its intended purpose of filter liquids]. Similarly, modifying the system of Butehorn et al. to be a single device including the route server and terminal interconnected by a network would render it unfit for communicating between terminals in

diverse locations. Otherwise, if the Office maintains that the terminals are in diverse locations in its proposed resulting combination of a single device, Appellants further traverse the rejection as it fails to provide a combination enabled for one skilled in the art to build – as such a single device including diversely located terminals would have to be excessively huge to communicate between terminals (included in the single device) encompassing the global Internet. *See, Butehorn* at paragraph [0003].

For at least these reasons, the Office action fails to present a *prima facie* obviousness rejection of independent claim 1 (nor of any of claims 1-23); and Appellants respectfully request the Board reverse the rejections of independent claim 1 (as well as the rejections of all pending claims 1-23).

2. Appellants reply, in addition to that presented in Appellants Appeal Brief, to arguments on pages 13-14 of the Examiner's Answer.

Appellants assert that in order to render claims 1-13 and 15-17, the prior art must teach each and every claim element, and its recited use, including that for "a set of types of routing changes that are of interest." Representative claim 1 is reproduced below.

1. A method performed within a router for distributing routing information within the router, the method comprising:
 - receiving a set of addresses from a client indicating route updates of interest to the client and a set of types of routing changes that are of interest;
 - maintaining one or more data structures including information corresponding to the set of addresses and the set of types of routing changes that are of interest;
 - receiving a particular route update; and
 - notifying the client of the particular route update in response to identifying the particular route update corresponds to both at least one address in the set of addresses and at least one routing attribute in the set of types of routing changes that are of interest;
 - wherein the client is within the router.

Therefore, in order to render claim 1 obvious, the prior art must, *inter alia*, teach the affirmative operations of:

- (a) receiving a set of addresses from a client indicating route updates of interest to the client and a set of types of routing changes that are of interest;
- (b) maintaining one or more data structures including information corresponding to the set of addresses and the set of types of routing changes that are of interest; and
- (c) notifying the client of the particular route update in response to identifying the particular route update corresponds to both at least one address in the set of addresses and at least one routing attribute in the set of types of routing changes that are of interest.

In other words, Appellants submit that the plain language of claim 1 requires a client to register a set of addresses and a set of types of routing changes that are of interest, maintain these items, and when both those items (the addresses and types of routing changes) are matched by a particular route update, the registered/subscribed client is notified.

The Office's logic, presented on page 14 of the Examiner's Answer, in rejecting claim 1 and the particular limitation of a set of types of routing changes that are of interest to the client is:

- (a) Butehorn et al. maintains a collection of learned routes.
- (b) Butehorn et al. maintains a number of timers.
- (c) Because the collection of learned routes and timers are maintained, the client wants to be notified of routing changes of interest to it.
- (d) Butehorn et al. teaches that routes are deleted therefore deleted routes are a type of routing updates.

First, this neither teaches nor suggests the registering by the client for the client being notifying the client of the particular route update in response to identifying the particular route update corresponds to both at least one address in the set of addresses and at least one routing attribute in the set of types of routing changes that are of interest. The mere notification of another device of all route updates fails to teach that the client registered for such notification. Note, inherent means it *must* occur. The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. MPEP § 2112 (*emphasis in original*). For example, the mere fact that a person receives a magazine fails to teach that the person registered (e.g., subscribed) to receive it - as the publisher might merely send to everyone or to people that it selected. Claim 1 recites an affirmative step that must be performed, and the Office fails to present such a teaching, and

Butehorn et al. neither teaches nor suggests such registration. Therefore, the Office fails to present a *prima facie* rejection of representative claim 1.

Furthermore, representative claim 1 further requires (1) the registration, (2) maintenance, and (3) responsive to both a set of addresses from a client indicating route updates of interest to the client and a set of types of routing changes that are of interest. A deleted route might be a type of route update, but the claim requires the registration, maintenance, and responsiveness to types of routing changes of interest. Butehorn et al. (relied upon by the Office for teaching this limitation) neither teaches nor suggests "a type of routing changes of interest" to the client; nor teaches nor suggests maintaining such type of routing changes of interest for identifying when to discriminately notify the client, nor teaches nor suggests the actual discriminatory notification of routing changes based on registered type(s) of routing changes of interest to the particular client. In fact, Butehorn et al. teaches that the route server collects *all the updates and multicasts them to all the route clients*. Butehorn et al. at paragraph [0090]. There is no teaching of these limitations, nor any reason to maintain nor discriminatorily react to such registered types of routing changes of interest, as Butehorn et al. distributes *all the updates to all the route clients*.

For at least these reasons, the Office action fails to present a proper rejection of the limitations of (1) a set of addresses indicating route updates of interest, and (2) a set of types of routing changes that are of interest. In Butehorn et al., clients do not tell the route server what addresses nor types are of interest to them for the server to determine and provide relevant, requested changes to the client. Rather, clients provide their routing information to the route server, which it accumulates and sends to all clients, whether it is of interest to them or not.

For at least these reasons, the Office fails to present a *prima facie* rejection of claim 1. For at least these reasons, Appellants respectfully request the Board reverse the rejections of claims 1-13 and 15-17.

Furthermore, in regards to independent claim 14 argued separately: Appellants note that representative claim 14 recites the limitation of "identifying that no client of said one or more clients has subscribed to receive an update corresponding to the particular route" to which the Office relies on its logic (presented on the previous page) in rejecting claims 14 and 15. For at least the reasons discussed *supra* and in the Appeal Brief, the Office fails to present a proper rejection for this limitation, and this limitation is neither taught nor suggested by the prior art of record. Therefore, Appellants submit that independent claim 14 and dependent claim 15 are allowable, and respectfully request their rejections be reversed.

Furthermore, in regards to claims 18-23 argued separately: Appellants note that representative independent claim 18 recites the limitation of "receiving a set of addresses from a client indicating route updates of interest to the client." In rejecting claim 18, the Office merely states that "Claims 18, 20 and 22 are rejected under the same rationale as state [sic] in independent claim 14 arguments." Examiner's Answer, page 11. The rejection of claim 14 does not include this limitation, and the Office does not address this limitation in its rejection of claim 14. (The Office also similarly rejects claims 19-23 for the same rationale as claim 14, but fails to address this claim limitation.) Therefore, the Office fails to present a rejection of this limitation, and therefore, fails to present a *prima facie* rejection of independent claim 18 (nor any of claims 18-23).

(Note, Appellants apologize for the typographical errors on page 19, lines 10-12 of the Appeal Brief which should be corrected as follows "However, claim 18 recites the limitations of "receiving a set of addresses from a client indicating route updates of interest to the client," which is not recited in ~~claim 18~~ claim 14, nor does the Office address this limitation in rejecting ~~claim 18~~ claim 14."

Additionally, Butehorn et al. (relied upon by the Office for teaching all limitations except the clients being within the device) neither teaches nor suggests such subscription by the client of what route changes to discriminately notify the client as recited in claim 18. In fact, Butehorn

et al. teaches that the route server collects *all the updates and multicasts them to all the route clients*. Butehorn et al. at paragraph [0090]. For at least these reasons, the Office action fails to present a proper rejection of the limitations of receiving a set of addresses from a client indicating route updates of interest to the client, nor the limitation of notifying the client of the particular route update in response to identifying the particular route update corresponds to the particular route of said at least one dependent route. In Butehorn et al., clients do not tell the route server what addresses are of interest to them for the server to determine and provide relevant, requested changes to the client. Rather, clients provide their routing information to the route server, which it accumulates and sends to all clients, whether it is of interest to them or not.

For at least these reasons, the Office fails to present a *prima facie* rejection of claim 18. For at least these reasons, Appellants respectfully request the Board reverse the rejections of claims 18-23.

Final Remarks. The Examiner's Answer in the Appeal Proceedings of this US Patent Application was mailed on January 26, 2008. This Reply Brief is being filed within two months of that date, and is in compliance with 37 CFR § 41.41. For at least the reasons presented herein this Reply Brief and in the Appeal Brief, Appellant requests the Office enter this Reply Brief and consider its arguments. Appellant further request all rejections be withdrawn and/or reversed, all claims be allowed, and the application be passed to issuance as all pending claims are believed to be allowable over the best art available, and the application is considered in good and proper form for allowance.

Respectfully submitted,
The Law Office of Kirk D. Williams

Date: March 23, 2009

By



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